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09/651,800	08/30/2000	Simona Cohen	6727/0H610	2081

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Darby & Darby P C
805 Third Avenue
New York, NY 10022

EXAMINER	
SCHLAIFER, JONATHAN D	

ART UNIT	PAPER NUMBER
2178	

DATE MAILED: 01/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/651,800	COHEN ET AL.	
	Examiner	Art Unit	
	Jonathan D. Schlaifer	2178	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 November 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-34* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-34* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *30 August 2000* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This action is responsive to an RCE filed for application 09/651,800 filed on 11/05/2004.

2. Claims 1-34 are pending in the case. Claims 1, 12, 22, and 30-32 are independent claims. Claims 1, 12, 22, and 30-32 have been amended.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. **Claims 1-2, 12-13, and 21-23 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Srivastava et al. (USPN 6,549,922 B1—filing date 10/1/1999), hereinafter Srivastava, further in view of Odom et al. (USPN 5,842,213—filing date 1/28/1997), hereinafter Odom, further in view of Kwang et al. (USPN 5,862,327—filing date 6/10/1996), hereinafter Kwang.**

4. **Regarding independent claim 1,** Srivastava discloses a method for processing source data from a plurality of diverse sources in a selected data domain (in the Abstract, Srivastava's invention is disclosed to process metadata, which may obviously be from any number of sources since the source of the metadata is the Internet), comprising: specifying a unified schema that lists markup tags in the selected data domain that can exist in a document in the markup language (in col. 3, lines 40-65, Srivastava specifies the use of schemata), and mapping the source data in accordance with the correspondences to generate unified data in the markup language (in col. 3, lines 40-65,

Srivastava describes generation of XML in a database in correspondence with the schemata). Srivastava fails to define correspondences of data fields from the sources to the markup tags listed by the schema. However, Odom, in col. 24, lines 13-39 describes the correspondence of data fields to markup tags in order to efficiently store structural information associated with data. It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate Odom's work with associating data fields with markup tags into the invention of Srivastava because it would allow efficient storage of structural information associated with data. Srivastava further fails to disclose that the unified schema is defined specifically for the selected data domain, from among a multiplicity of schemata that are specific to different data domains, wherein each of the domains covers a global application field and is accessed by multiple users, the specified schema listing markup tags. However, Kwang discloses in col. 9, lines 35-65 the use of multiple schema that are specific to different data domains. These cover a global application field because they are pertinent to a subpart of an overall database (a global application) are inherently capable of being used by multiple users (nothing prevents more than one user from using another user's data domain, and this in fact would be beneficial to promote information sharing between user accounts). It would have been obvious to one of ordinary skill in the art at the time of the invention to use Kwang's multiple schema specific to different data domains in conjunction with Srivastava because it aids in managing specifically relevant portions of a system (see Kwang col. 9, lines 35-40).

5. **Regarding dependent claim 2,** in col. 3, lines 40-65, Srivastava discloses that the markup language used in the invention is Exensible Markup Language (XML).
6. **Regarding independent claim 12,** it is an apparatus that performs the method of claim 1, and may be rejected under similar rationale.
7. **Regarding dependent claim 13,** it is an apparatus that performs the method of claim 2, and may be rejected under similar rationale.
8. **Regarding dependent claim 21,** Srivastava discloses a plurality of distributed data storage devices, which hold the diverse data sources, wherein the processor is adapted to retrieve the source data from the distributed devices (Srivasta as shown in Figure 1 draws information from the Internet).
9. **Regarding independent claim 22,** it is a software product that performs the method of claim 1, and may be rejected under similar rationale.
10. **Regarding dependent claim 23,** it is a software product that performs the method of claim 2, and may be rejected under similar rationale.
11. **Claims 3, 14, and 24 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Srivastava, further in view of Odom, further in view of Kwang, further in view of Call (USPN 6,154,738—filing date 5/21/1999)**
12. **Regarding dependent claim 3,** Srivastava, Odom, and Kwang fail to disclose a method wherein specifying the unified schema comprises specifying a Document Type Definition (DTD). However, Call describes how one can enforce data conformity through the use of DTD's in col. 3, lines 1-10. It would have been obvious to one of ordinary skill in the art

at the time of the invention to enhance Srivastava, Odom, and Kwang's inventions by using DTD's in the manner of Call to enforce data conformity.

13. **Regarding dependent claim 14,** it is an apparatus that performs the method of claim 3, and may be rejected under similar rationale.

14. **Regarding dependent claim 24,** it is a software product that performs the method of claim 3, and may be rejected under similar rationale.

15. **Claims 4-5, 10-11, 15-16, 19-20, and 25-27 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Srivastava, further in view of Odom, further in view of Kwang, further in view of Call, further in view of Draper (USPN 6,449,620 B1—filing date 3/2/2000)**

16. **Regarding dependent claim 4,** Srivastava, Odom, Kwang, and Call fail to disclose that defining the correspondences comprises defining data transformation rules in Extensible Style Language (XSL). However, Draper discloses the use of XSL to define data transformation rules for XML in col. 8, lines 28-45 in order to process structured information pages efficiently. It would have been obvious to one of ordinary skill in the art at the time of the invention to use XSL as in Draper in order to process structured information pages efficiently.

17. **Regarding dependent claim 5,** Srivastava, Odom, Kwang, and Call fail to disclose a method wherein mapping the source data comprises transforming the data using an XSL engine. However, Draper discloses the use of XSL to define data transformation rules for XML in col. 8, lines 28-45 in order to transform structured information pages efficiently. Given this capability, it would have been clearly obvious to one of ordinary skill in the

art to use it for a mapping. It would have been obvious to one of ordinary skill in the art at the time of the invention to use XSL as in Draper for a mapping in order to process structured information pages efficiently.

18. **Regarding dependent claim 10,** Srivastava, Odom, Kwang, and Call fail to disclose a method comprising querying the sources by addressing a query to the unified data in the markup language. However, Draper discloses in the Abstract that the interrelated markup language includes a query in order to successfully retrieve data from markup language pages. It would have been obvious to one of ordinary skill in the art at the time of the invention to address a query to the unified data in the markup langue in order to successfully retrieve data from markup language pages.

19. **Regarding dependent claim 11,** Srivastava, Odom, Kwang, and Call fail to disclose wherein mapping the source data comprises mapping the source data responsive to the query. However, Draper discloses in the Abstract that when the markup language is mapped, it maps source data to source data responsive to the query in order to manipulate the organization of the corresponding information. It would have been obvious to one of ordinary skill in the art at the time of the invention to map data to data in order to manipulate the organization of the corresponding information.

20. **Regarding dependent claim 15,** it is an apparatus that performs the method of claim 4, and may be rejected under similar rationale.

21. **Regarding dependent claim 16,** it is an apparatus that performs the method of claim 5, and may be rejected under similar rationale.

22. **Regarding dependent claim 19,** it is an apparatus that performs the method of claim 10, and may be rejected under similar rationale.

23. **Regarding dependent claim 20,** it is an apparatus that performs the method of claim 11, and may be rejected under similar rationale.

24. **Regarding dependent claim 25,** it is a software product that performs the method of claim 4, and may be rejected under similar rationale.

25. **Regarding dependent claim 26,** it is a software product that performs the method of claim 5, and may be rejected under similar rationale.

26. **Regarding dependent claim 27,** it is a software product that performs the method of claim 10, and may be rejected under similar rationale.

27. **Claims 6-7, 9, and 17-18 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Srivastava, further in view of Odom, further in view of Kwang further in view of Kuwahara (USPN 6,202,072 B1—filing date 12/5/1997)**

28. **Regarding dependent claim 6,** Srivastava, Odom, and Kwang fail to disclose a method wherein defining the correspondences comprises selecting one or more of the data fields in the csources to correspond to one of the makrup tags in the schema and determining a conversion function to appliy to the one or more data fields. However, Kuwahara, in col. 6, lines 50-60, discloses a tag-based conversion function that offers the advantage of mediating interchanges between file formats. It would have been obvious to one of ordinary skill in the art at the time of the invention to use a tag-based conversion function with the method of Srivastava, Odom, and Kwang in order to mediate interchanges between file formats.

29. **Regarding dependent claim 7,** Srivastava, Odom, and Kwang fail to disclose a method wherein determining the conversion function comprises determining the function so as to generate a data element indicated by the corresponding one of the markup tags. However, Kuwahara, in col. 6, lines 59-60 data and tags are correlated in order to mediate interchanges between file formats. It would have been obvious to one of ordinary skill in the art at the time of the invention to generate data elements indicated by corresponding tags in order to mediate interchanges between file formats.
30. **Regarding dependent claim 9,** Srivastava, Odom, and Kwang fail to disclose a method wherein at least some of the source data are represented in a language other than the markup language, and wherein mapping the source data comprises transforming the data to the markup. However, in Kuwahara's Abstract, plain text is converted to the markup language (SGML) in order to allow greater versatility of input. It would have been obvious to one of ordinary skill in the art at the time of the invention to offer other formats (such as plain text) to be converted into markup language in order to allow greater versatility of input.
31. **Regarding dependent claim 17,** it is an apparatus that performs the method of claim 6, and may be rejected under similar rationale.
32. **Regarding dependent claim 18,** it is an apparatus that performs the method of claim 9, and may be rejected under similar rationale.
33. **Claim 8 remains rejected under 35 U.S.C. 103(a) as being unpatentable over Srivastava, further in view of Odom, further in view of Kwang, further in view of**

Kuwahara, further in view of Motoyama et al. (USPN 5,504,891—filing date 6/13/1994), hereinafter Motoyama

34. **Regarding dependent claim 8,** Srivastava, Odom, Kwang and Kuwahara fail to disclose a method wherein determining the conversion function comprises determining the function to generate an attribute of the unified data indicated by the corresponding one of the markup tags. However, Motoyama reveals an attribute conversion procedure in col. 18, lines 9-34, which has the advantage that it can complete the conversion process for complex data items. It would have been obvious to one of ordinary skill in the art at the time of the invention to use an attribute conversion in the manner of Motoyama in order to help complete the conversion process for complex data items.

35. **Claim 28 remains rejected under 35 U.S.C. 103(a) as being unpatentable over Srivastava, further in view of Odom, further in view of Kwang, further in view of Call, further in view of Draper, further in view of Cianfrocca et al. (USPN 6,088,796—filing date 8/6/1998), hereinafter Cianfrocca**

36. **Regarding dependent claim 28,** Srivastava, Odom, Kwang, Call, and Draper fail to disclose a product that comprises middleware, which cause the computer to map the source data responsive to the query. In Cianfrocca, col. 8, lines 40-67, the inventor describes middleware, in order to regulate communication on a network. It would have been obvious to one of ordinary skill in the art at the time of the invention to use middleware as in Cianfrocca in order to regulate communication on a network.

37. **Claim 29 remains rejected under 35 U.S.C. 103(a) as being unpatentable over Srivastava, further in view of Odom, further in view of Kwang, further in view of**

Call, further in view of Draper, further in view of Cianfrocca, further in view of Kleinerman (USPN 6,041,365—filing date 6/30/1997)

38. **Regarding dependent claim 29,** Srivastava, Odom, Kwang, Call, Draper, and Cianfrocca fail to disclose a product wherein at least some of the source data are represented in a language other than the markup language, and wherein the middleware causes the computer transform the data to the markup language. However, Kleinerman, in col. 2, lines 32-46 indicates that the middleware in the invention is compatible with a plurality of languages and protocols to increase the number of possible compatible systems. It would have been obvious to one of ordinary skill in the art at the time of the invention to have the middleware in a combination of the inventions of Srivastava, Odom, Call, Draper, and Cianfrocca to increase the number of possible compatible systems.

39. **Claim 30-34 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Srivastava, further in view of Odom, further in view of Kwang, further in view of Sarkar (USPN 6,418,448 B1—filing date 12/6/1999).**

40. **Regarding independent claim 30,** it is essentially similar to claim 1 and is rejected in a similar manner except that Srivastava, Odom, and Kwang fail to disclose the limitation of addressing a query to the sources in the markup language. However, Sarkar, in claim 14 of the patent (see col. 26, lines 40-50) discloses addressing a SQL query to XML sources. Further, Sarkar may be considered to map the source data to the query upon receiving the query and to the unified schema responsively to the query in that the mapping is not completed until the query is receiving, and the mapped data is requested. It would have

been obvious to one of ordinary skill in the art at the time of the invention to address a query to markup language sources because using a query would provide a customizable filter for information retrieval.

41. **Regarding independent claim 31,** it is an apparatus that performs the method of claim 30, and it is rejected under similar rationale.

42. **Regarding independent claim 32,** it is a computer software product that encodes the method of claim 30, and it is rejected under similar rationale.

43. **Regarding dependent claim 33,** Srivastava, Odom, and Kwang fail to disclose that the product comprises middleware, which causes the computer to map the source data responsively to the query. However, Sarkar discloses the use of middleware as a mapping aid in claim 14 of the patent (see col. 26, lines 40-50). It would have been obvious to one of ordinary skill in the art at the time of the invention to use middleware as a transformational aid because middleware is a standard and reliable method of regulating information flow between data sources.

44. **Regarding dependent claim 34,** Srivastava, Odom, and Kwang fail to disclose that at least some of the source data are represented in a language other than the markup language and wherein the middleware causes the computer to transform the data to the markup language. However, Sarkar discloses the use of middleware as a mapping aid in claim 14 of the patent (see col. 26, lines 40-50), and there discloses that it is used in conjunction with CORBA, and since it was notoriously well known in the art at the time of the invention that CORBA is used to negotiate data transmission in different formats, it would have been obvious to one of ordinary skill in the art at the time of the invention

to use Sarkar's CORBA-compliant middleware to lend the system greater versatility by allowing translation of source data from a language other than the markup language into the markup language.

Response to Amendment

45. Applicant's arguments filed 11/05/2004 have been fully considered but they are not persuasive.

46. With respect to the arguments regarding Claims 1, 2, 12, 13, and 21-23, the Applicant alleges that the part of the rejection involving Kwang is overcome by the Amendment presented in this RCE. The Examiner does not believe this to be the case. As stated in the modified rejection, the Examiner believes that Kwang can be properly considered to inherently involve establishing domains in a global application field (the domains are parts of a global database) and they can be used by multiple users to promote information exchange. Hence, the Examiner does not believe that this rejection has been overcome.

47. Similarly, the rejections to claims 3-11, 14-20, and 24-29 have not been overcome by this amendment.

48. The Applicant alleges that the rejections to claims 30-32 have been overcome by the Amendment. The Examiner does not believe this to be the case for the reasons stated in the rejection, namely, that the association is only actually made when the query is run and hence it can be considered a dynamic association.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

USPN 6,009,422 (filing date 11/26/1997)—Ciccarelli

USPN 6,618,727 B1 (filing date 9/22/1999)—Wheeler et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan D. Schlaifer whose telephone number is (571) 272-4129. The examiner can normally be reached on 8:30-5:00, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Hong can be reached on (571) 272-4124. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JS

STEPHEN S. HONG
PRIMARY EXAMINER